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(71) Applicant (for all designated States except US): LG CHEM, LTD. [KR/KR]; LG Twin Tower, Yoido-dong 20, Youngdungpo-ku, Seoul 150-721 (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): KANG, Jung-Won [KR/KR]; 2-306 Geukdong apt., Hagye-dong, Nowon-gu, Seoul 139-230 (KR). MOON, Myung-Sun [KR/KR]; 105-804 Saemmeori apt., Dunsan 2-dong, Seo-gu, Dae-jeon-city 302-777 (KR). KO, Min-Jin [KR/KR]; 5-304 LG employee's apt., Doryong-dong, Yuseong-gu, Dae-jeon-city 305-340 (KR). KANG, Gwi-Gwon [KR/KR]; 1036-19 Hwagok 3-dong, Gangseo-gu, Seoul 157-013 (KR). SHIN, Dong-Seok [KR/KR]; 48-207 Siyoung apt., Sincheon-dong, Songpa-gu, Seoul 138-240 (KR). NAM, Hae-Young [KR/KR]; 103-407 Boseong apt., Bokdae 2-dong, Heungdeok-gu, Cheongju-city, Chungcheongbuk-do 361-272 (KR). KIM, Young-Duk [KR/KR]; 101-904 Cheonggu apt., Jeonmin-dong,

Yuseong-gu, Daejeon-city 305-390 (KR). CHOI, Bum-Gyu [KR/KR]; 311-204 Songganggreen apt., Songgang-dong, Yuseong-gu, Daejeon-city 305-751 (KR). KIM, Byung-Ro [KR/KR]; 406-406 Expo apt., Jeonmin-dong, Yuseong-gu, Daejeon-city 305-762 (KR). PARK, Sang-Min [KR/KR]; 110-402 Hyundai apt., Yucheon 2-dong, Jung-gu, Daejeon-city 301-757 (KR).

(74) Agent: YOU ME PATENT & LAW FIRM; Teheran Bldg., 825-33, Yoksam-dong, Kangnam-ku, Seoul 135-080 (KR).

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(54) Title: ORGANIC SILICATE POLYMER AND INSULATION FILM COMPRISING THE SAME

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(57) Abstract: The present invention relates to a composition for forming a low dielectric insulating film for a semiconductor device, particularly to an organosilicate polymer prepared by mixing a thermally decomposable organic silane compound that is capped with a silane compound at both its ends, and a common silane compound or silane oligomer, and then adding water and a catalyst to conduct hydrolysis and condensation, as well as to a coating composition for an insulating film for a semiconductor device comprising the same, a coating composition for an insulating film for a semiconductor device further comprising a pore-forming organic substance, a method for preparing an insulating film for a semiconductor device by coating the composition and curing, and a semiconductor device comprising a low dielectric insulating film prepared by the method. The organosilicate polymer prepared according to the present invention has superior thermal stability and mechanical strength; an insulating film-forming composition comprising the same can be used for an interlayer insulating film for low dielectric wiring that can contribute to a high speed semiconductor, reduce power consumption, and remarkably decrease cross-talk between metal wiring; and a film obtained by applying the composition to an insulating film has superior coating properties, inhibits phase-separation, can easily control minute pores because organic substances are thermally decomposed to form pores during a curing process, and has superior insulating properties and a remarkably decreased film density.